9th Workshop on RF Superconductivity

1999

La Fonda Hotel
Santa Fe, New Mexico USA
November 1–5, 1999

Overview

Particle accelerators have evolved from being specialized instruments of nuclear and particle physics, to being the tools of choice for fields as diverse as ion implantation, high-energy particle physics, surface analysis, medical treatments, waste sterilization, airport security, food irradiation, spallation neutron physics, and coherent light research. During the past 60 years, the technology of designing and building these machines has matured significantly.

The desire to achieve higher performance in particle accelerators at lower cost is widespread. In the early 1970s, the first tests using superconducting niobium cavities were performed with the intent of taking advantage of the extremely low surface resistance of superconducting material, which would lead to high-efficiency, high-gradient accelerators. These tests heralded the beginnings of radio-frequency (RF) superconductivity as an accelerator technology in its own right.

Since then, scientists around the world have applied this technology in accelerator applications to make higher performance particle accelerators, and to better understand the limiting mechanisms in superconducting cavities. In 1980, a workshop on RF superconductivity was held at Karlsruhe to bring together the contributors in the field. This was the first workshop, and now, workshops are held every other year.

Technical Program

The field of RF superconductivity has grown steadily since that first workshop. The 9th Workshop on RF Superconductivity will bring together over 200 contributors active in this field, from dozens of laboratories and industries around the world. The Workshop will cover the status of and advances in RF superconductivity, technical review talks on field emission in niobium cavities, fabrication, cleaning, and surface preparation; RF power delivery; and future applications of superconducting technology. English will be the official language for the Workshop.

The diversity of topics, combined with the unique charm of autumn in Santa Fe and the historic La Fonda Hotel, promise to make this an informative, interesting, and enjoyable meeting.

Main Topics

- Operational experience with superconducting accelerators
- Laboratory review talks
- The quest for high gradients
- High-intensity proton linac applications
- Cavity fabrication and manufacturing
- High-power and HOM couplers and windows
- Future applications of RF superconductivity